

FIG.1

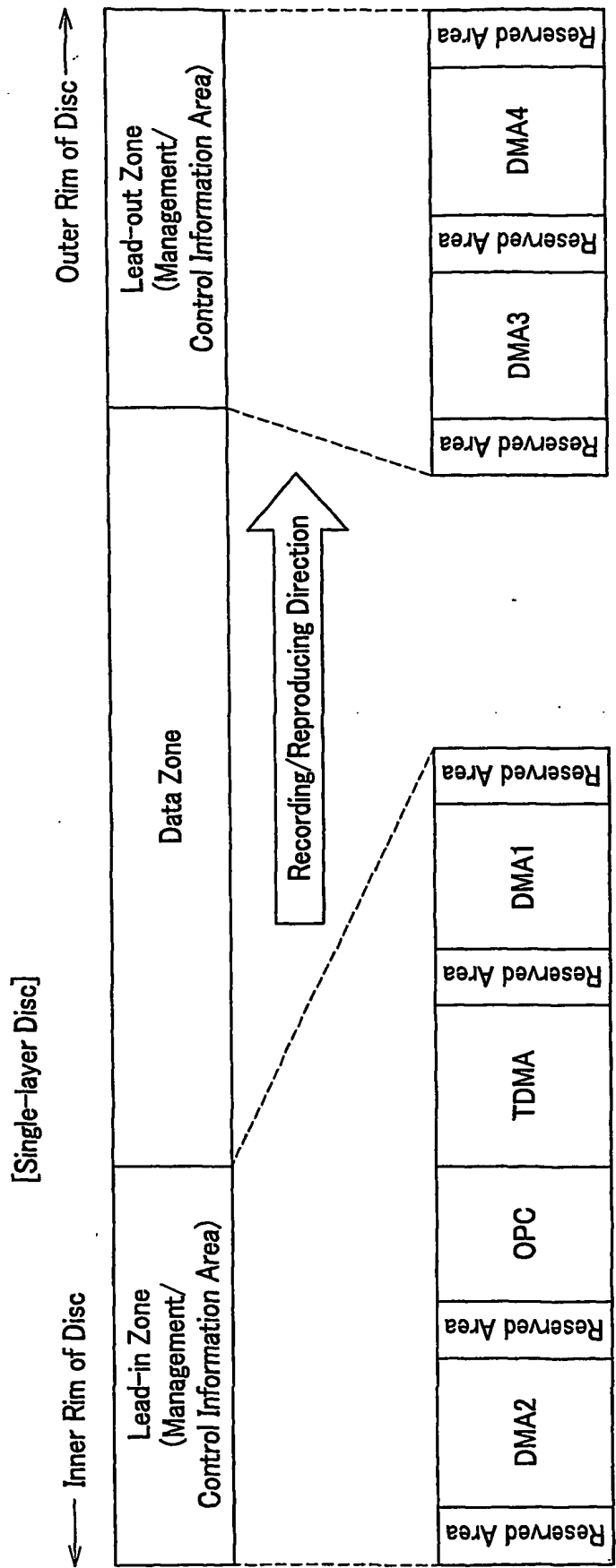


FIG.2

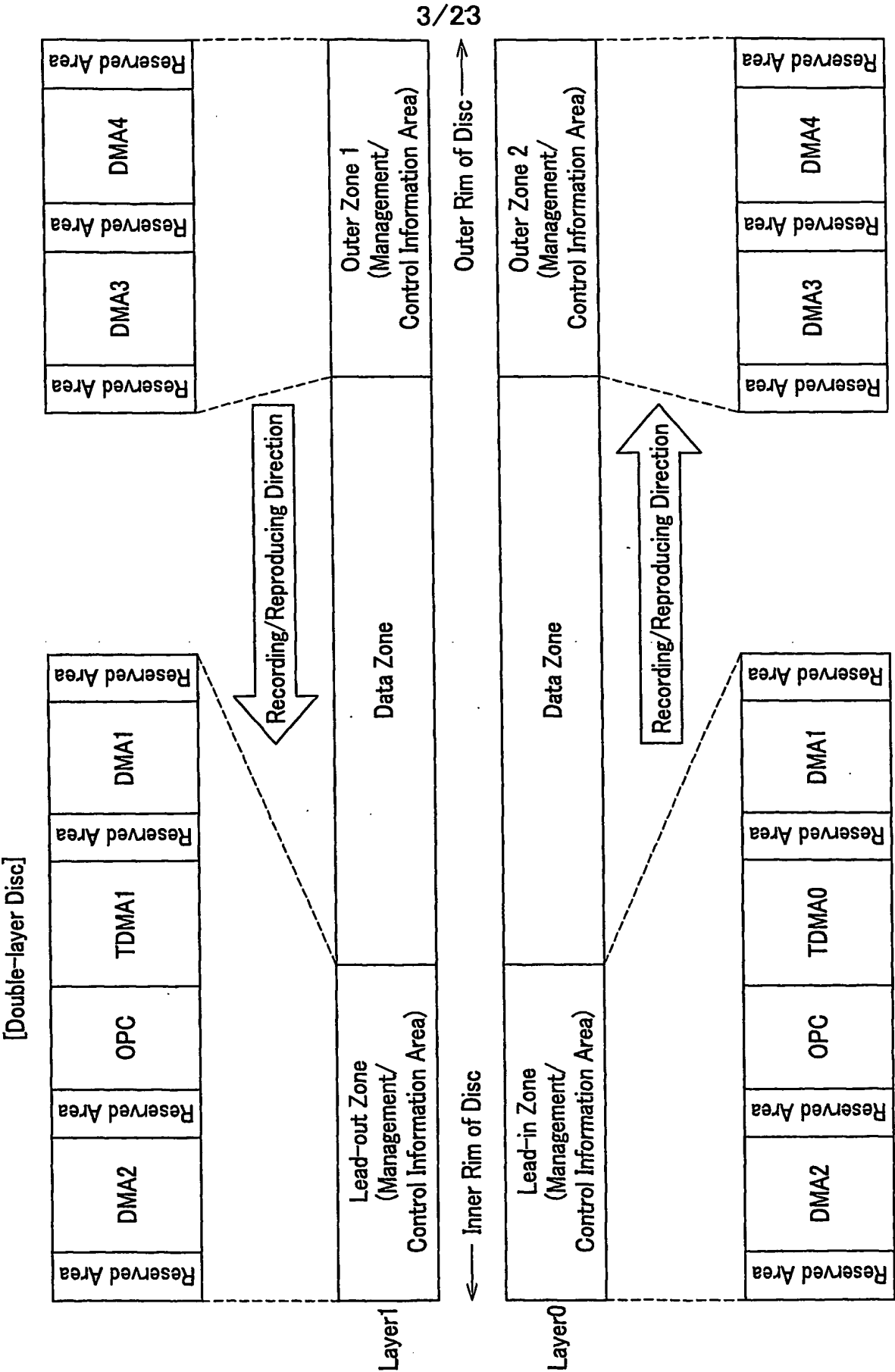


FIG.3

DMA

Cluster Number	Contents	Number of Clusters
1 - 4	DDS(Same contents are repeated four times)	4
5 - 8	DFL#1	4
9 - 12	DFL#2 (Same contents as #1)	4
13 - 16	DFL#3 (Same contents as #1)	4
17 - 20	DFL#4 (Same contents as #1)	4
21 - 24	DFL#5 (Same contents as #1)	4
25 - 28	DFL#6 (Same contents as #1)	4
29 - 32	DFL#7 (Same contents as #1)	4

32  
Clusters

FIG.4

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DDS(Disc Definition Structure)

Byte Position	Contents	Number of Bytes
0	DDS ID = "DS"	2
2	DDS Form Number	1
3	Reserved(00h)	1
4	Number of Times of DDS Update (=Serial Number of Last TDDS)	4
8	Reserved(00h)	8
16	Reserved(00h)	4
20	Reserved(00h)	4
24	Defect list Start Physical Sector Address (AD_DFL) in DMA	4
28	Reserved(00h)	4
32	User Data Area Start Physical Sector Address	4
36	User Data Area End Logical Sector Address	4
40	Size of Inner Rim Side Exchange Area (ISA)	4
44	Size of Outer Rim Side Exchange Area (OSA)	4
48	Reserved(00h)	4
52	Exchange Area Usable Flag	1
53	Reserved(00h)	65483

One Sector  
(65536 bytes)

FIG.5

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DFL(Defect List)

Byte Position	Contents	Number of Bytes
0	Defect List Management Information	64
64	Exchange Address Information at#1	8
72	Exchange Address Information at#2	8
	Exchange Address Information at#N	8
64+8 x N	Terminal End of Exchange Address Information	8
	00h	
	00h	

4 Clusters

FIG.6

DFL/TDFL Defect List Management Information

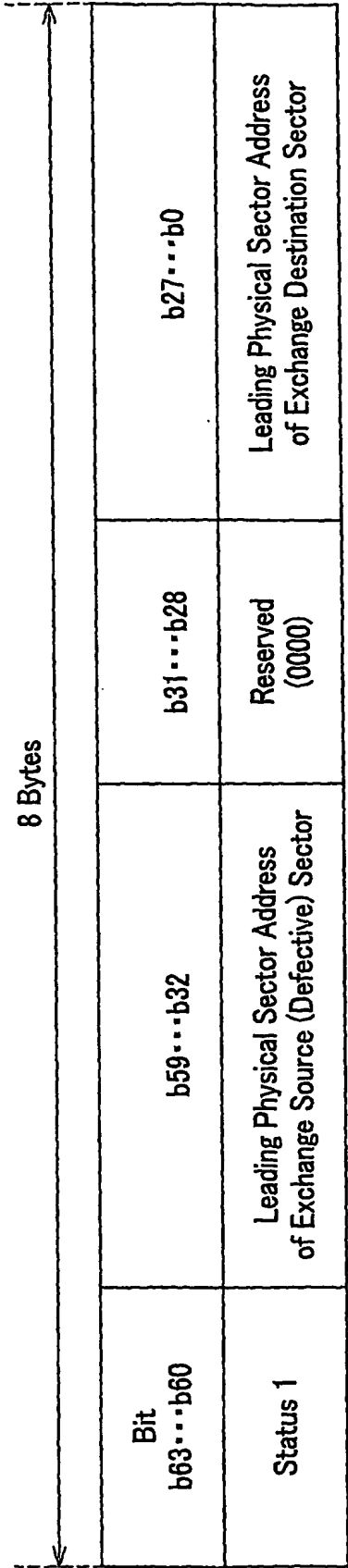
Byte Position	Contents	Number of Bytes
0	DFL ID = "DL"	2
2	DFL Form Number	1
3	Reserved 00h	1
4	Number of Times of DFL Update	4
8	Reserved 00h	4
12	Number of Registered DFL (N_DFL)	4
16	Reserved 00h	8
24	Number of Unrecorded Clusters of ISA/OSA	4
28	Reserved 00h	36

64

Bytes

FIG.7

DFL/TDFL Exchange Address Information at i



[Status 1]

- 0000.....Usual Exchange
  - 0101.....Burst Transfer Start Address
  - 1010.....Burst Transfer End Address
- The values other than those given above are reserved

FIG.8



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Temporary DMA (TDMA)

Cluster Number	Contents	Number of Clusters
1	Space Bitmap	1
2	Temporary Defect List (TDFL)	1 ~ 4
2048		

2048 Clusters

FIG.9

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## Space Bitmap Information

Sector	Byte Position	Contents	Number of Bytes
0	0	Space Bitmap Identifier = "UB"	2
	2	Format Version = 00h	1
	3	Reserved, 00h	1
	4	Layer Number (0or1)	4
	8	Reserved, 00h	8
	16	Bitmap Information	4
	20	Start Cluster First PSN	4
	24	Bitmap Data Start Byte Position*1	4
	28	Validate Bit Length in Bitmap data	4
		Reserved, 00h	36
	64	Reserved, 00h	1984
1	0	Bitmap data	2048
2	0	Bitmap data	2048
N	0	Bitmap data (0 < N < 31)	M
N	M	Reserved, 00h (0 ≤ M ≤ 2048)	2048-M
N + 1	0	Reserved, 00h	2048
31	0	Reserved, for Temporary DDS	2048

Relative Address from \*1 "Space Bitmap Identifier" Field

FIG. 10

TDFL (Temporary Defect List)

Byte Position	Contents	Number of Bytes
0	Defect List Management Information	64
64	Exchange Address Information at#1	8
72	Exchange Address Information at#2	8
	Exchange Address Information at#N	8
64+8 x N	Terminal End of Exchange Address Information	8
	00h	
65536 x N-2048	Temporary DDS (TDDS)	2048

1 to 4 Clusters

FIG.11

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TDDS(Temporary Disc Definition Structure)

Byte Position	Contents	Number of Bytes
0	DDS ID = "DC"	2
2	DDS Form Number	1
3	Reserved (00h)	1
4	TDDS Serial Number	4
8	Reserved (00h)	8
16	Reserved (00h)	4
20	Reserved (00h)	4
24	Temporary Defect List Start Physical Sector Address (AD_DFL) in TDMA	4
28	Reserved (00h)	4
32	User Data Area Start Physical Address	4
36	User Data Area End Logical Address	4
40	Size of Inner Rim Side Exchange Area (ISA)	4
44	Size of Outer Rim Side Exchange Area (OSA)	4
48	Reserved (00h)	4
52	Exchange Area Usable Flag	1
53	Reserved (00h)	971
1024	User Data Last Recording Physical Sector Address (LRA)	4
1028	Latest Space Bitmap Start Physical Sector Address (AD_BPO) in TDMA	4
1032	Reserved (00h)	1016

1 Sector  
(2048 bytes)

FIG.12

Exchange Area ISA and OSA

FIG.13A [Single-layer Disc]

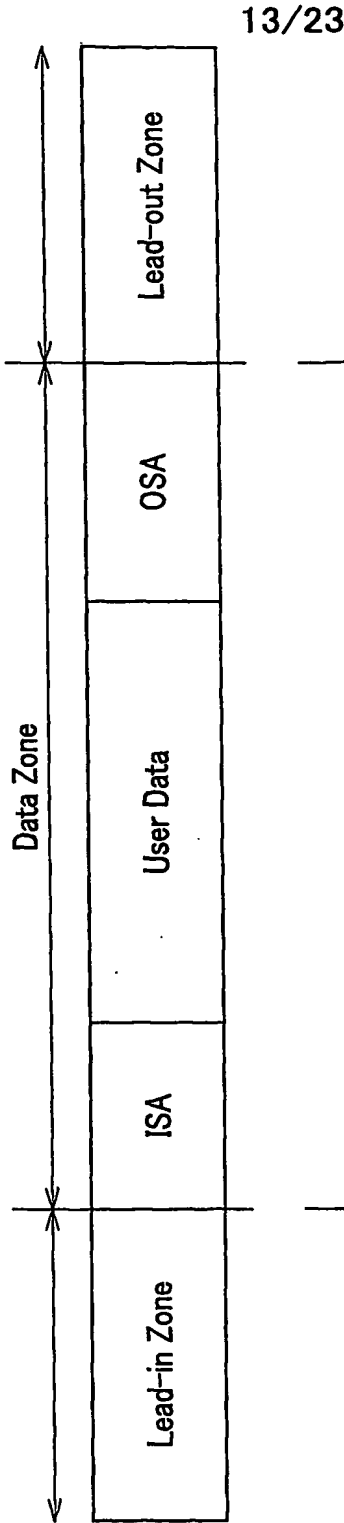
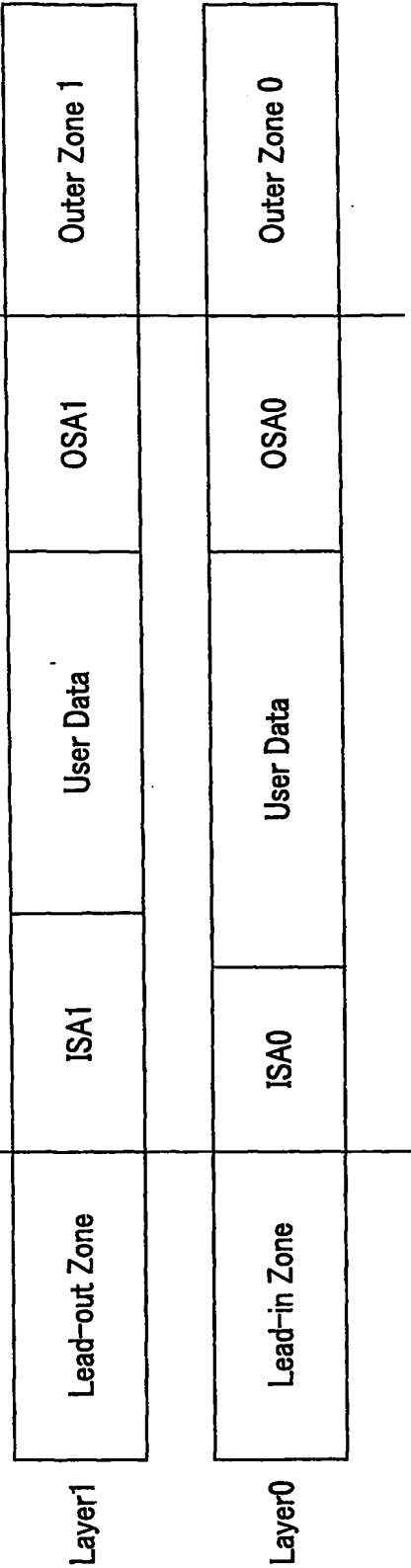


FIG.13B [Double-layer Disc]



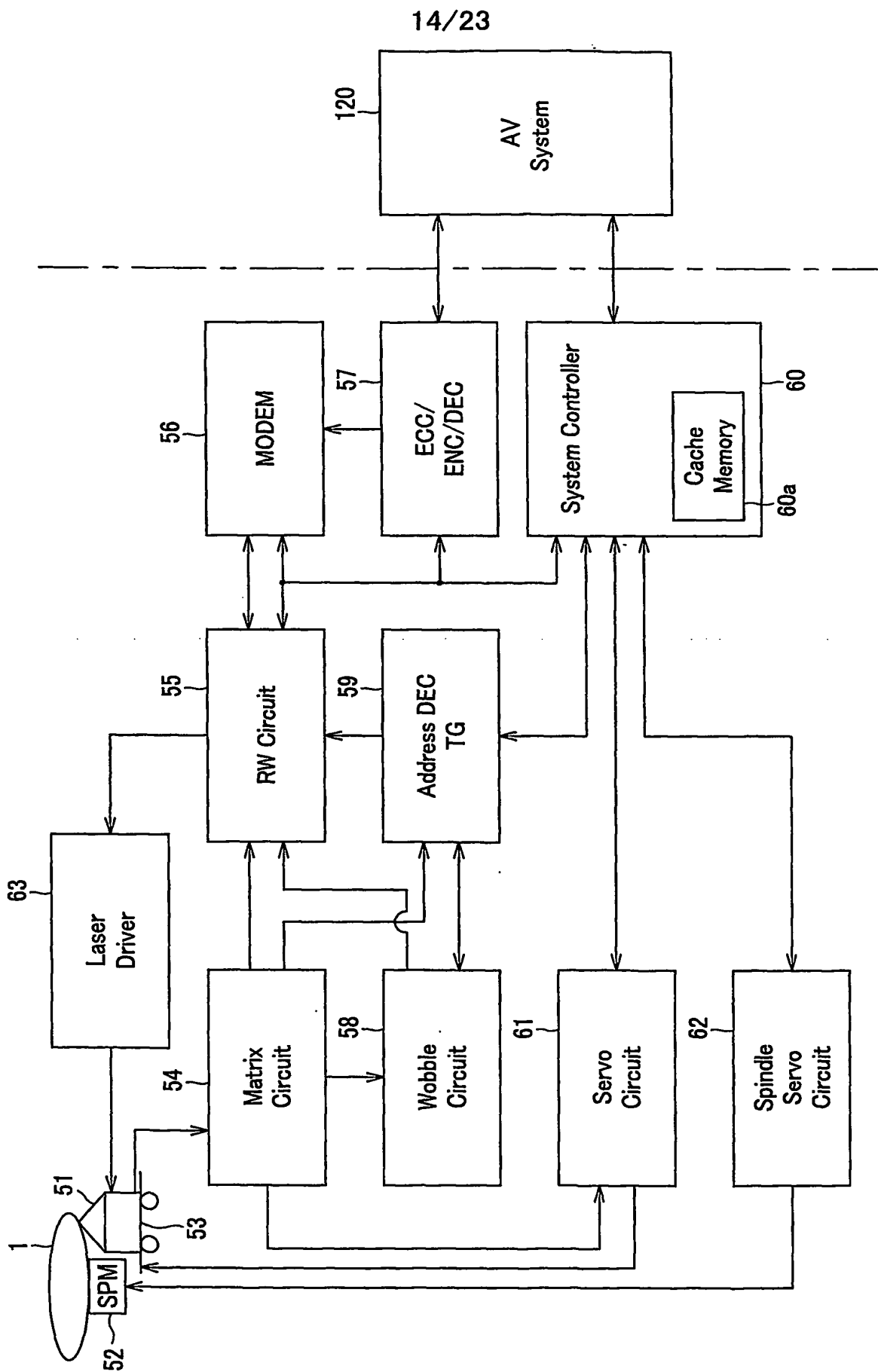


FIG.14

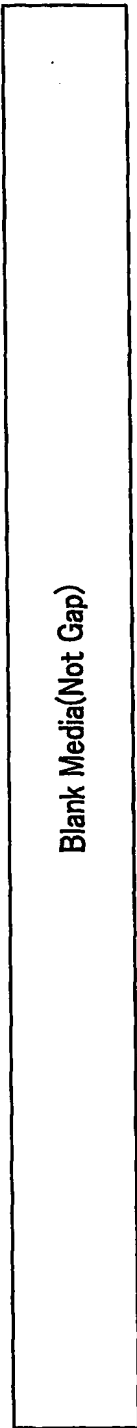


FIG. 15A

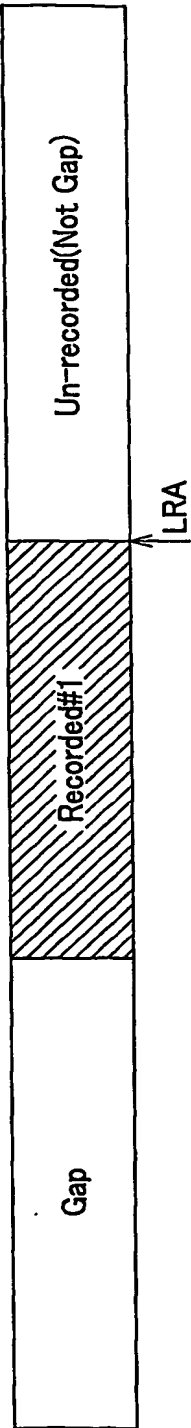


FIG. 15B

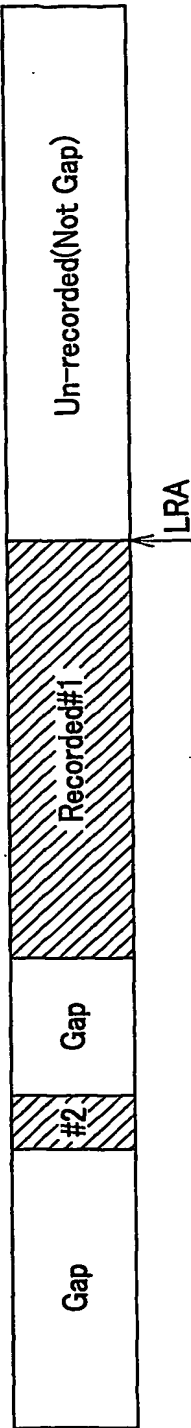


FIG. 15C

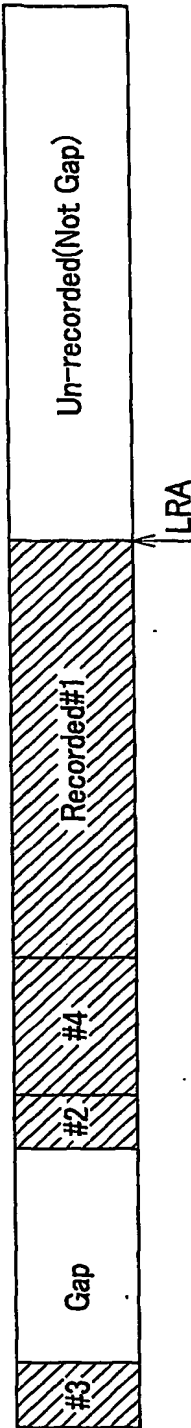


FIG. 15D

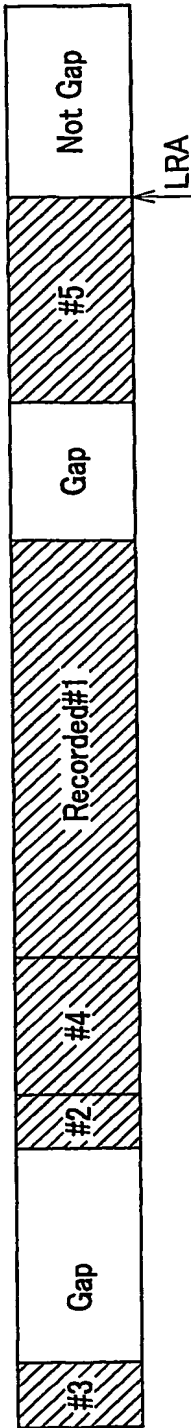


FIG. 15E

Gap:Unrecorded Area Ahead of Recorded Area  
LRA:Address of User Data Recorded on the Outermost Rim

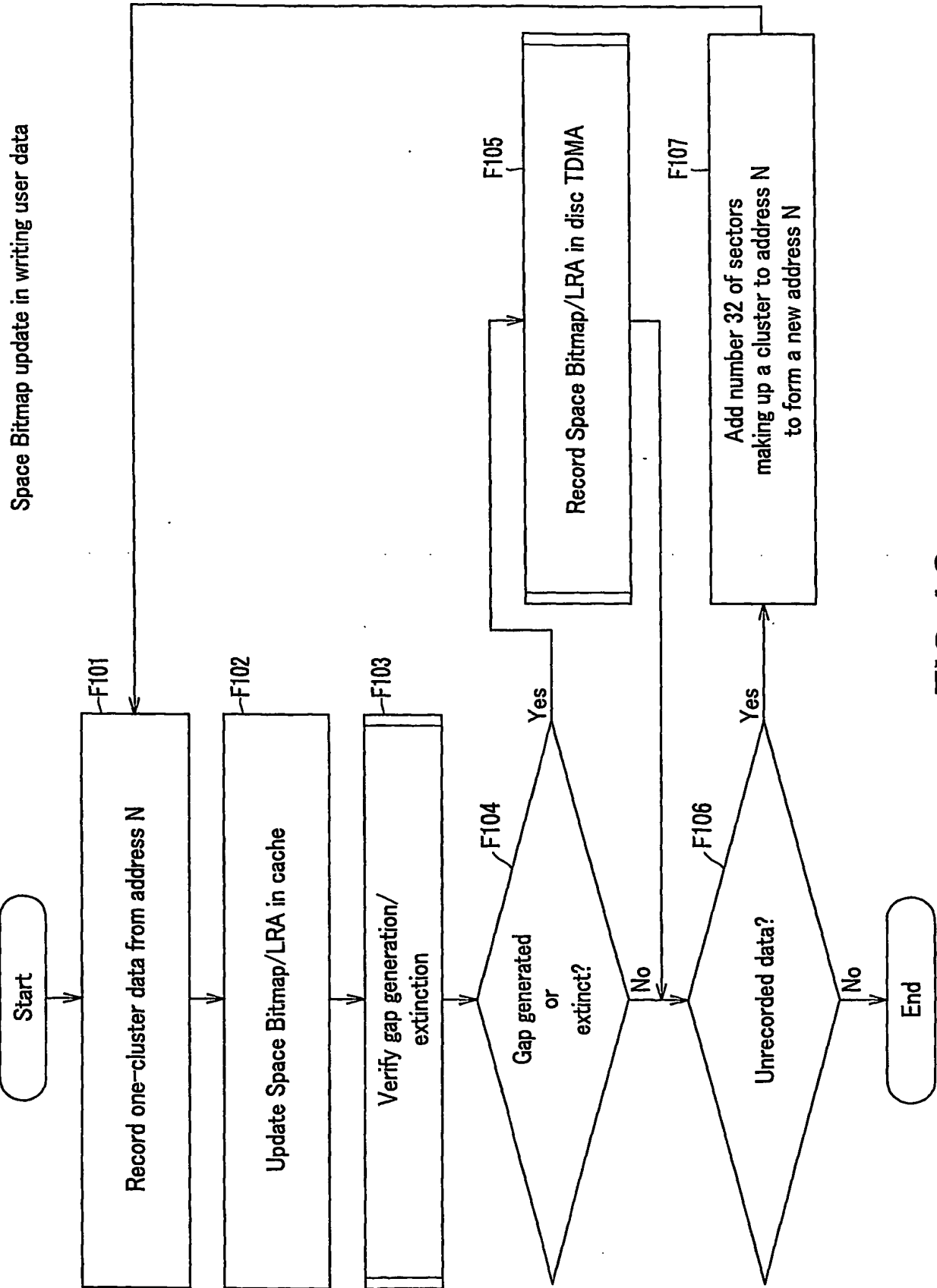


FIG.16



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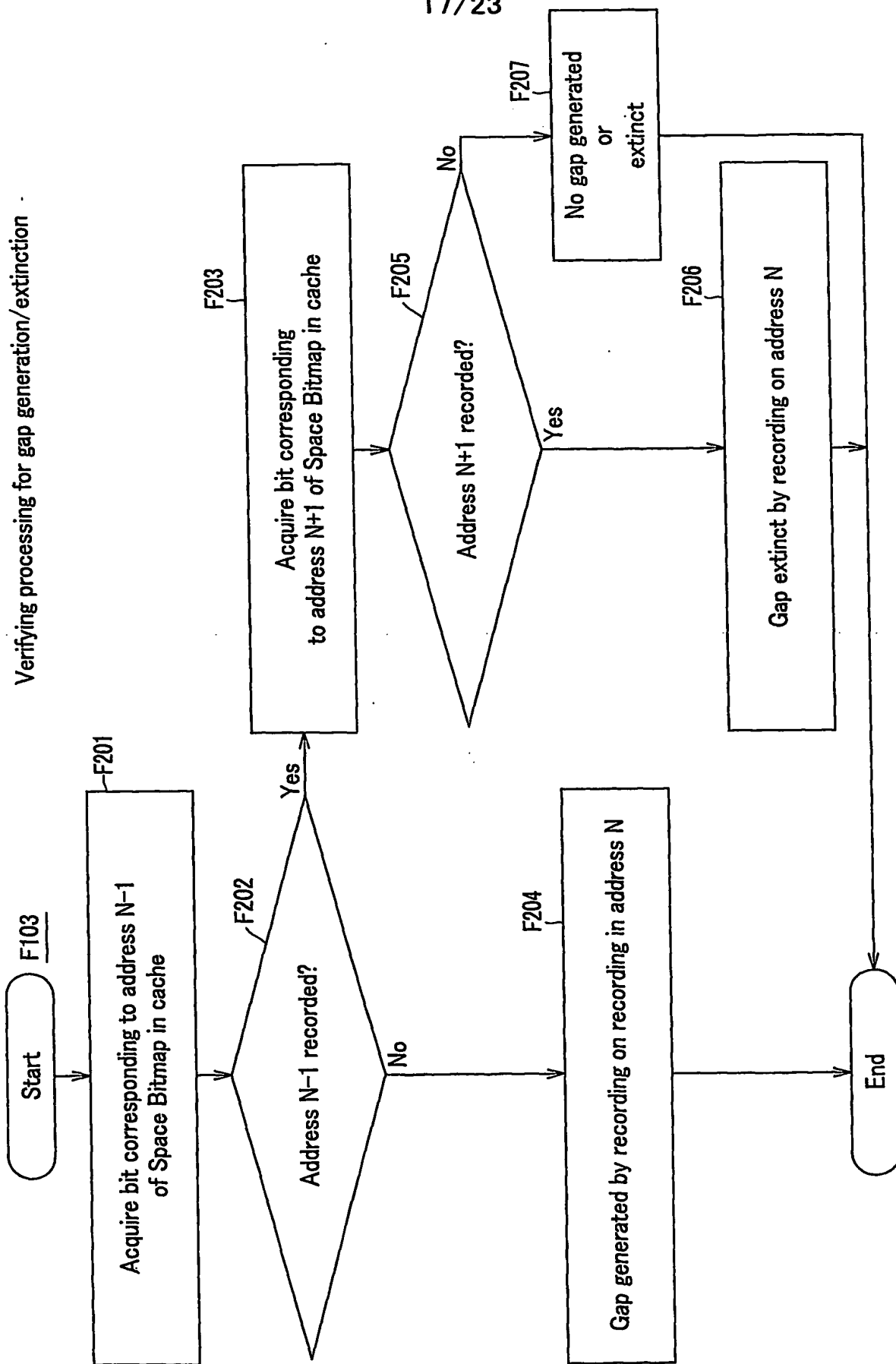


FIG.17

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## Record Space Bitmap/LRA in disc TDMA

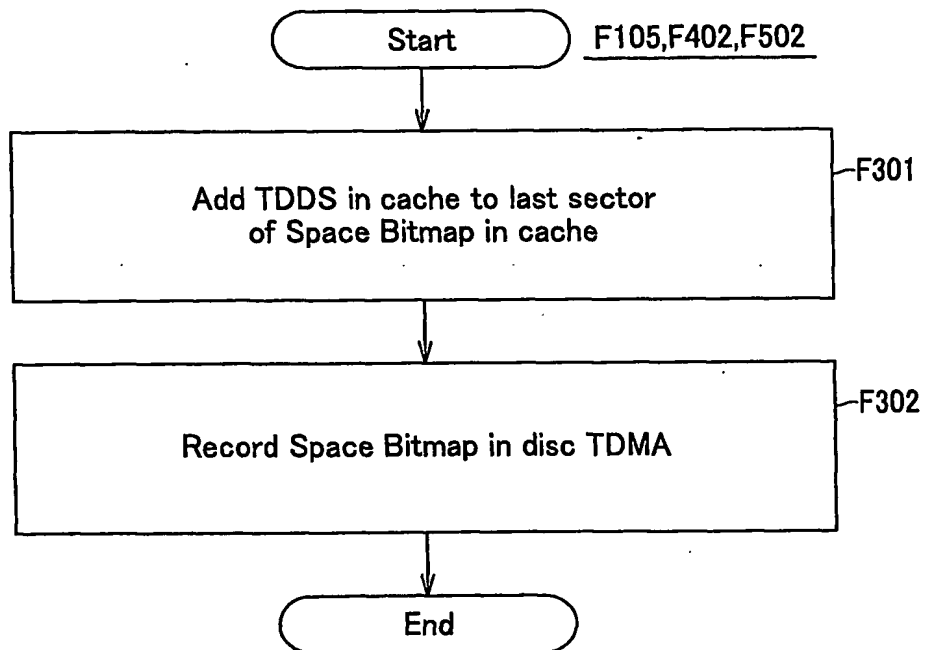


FIG.18

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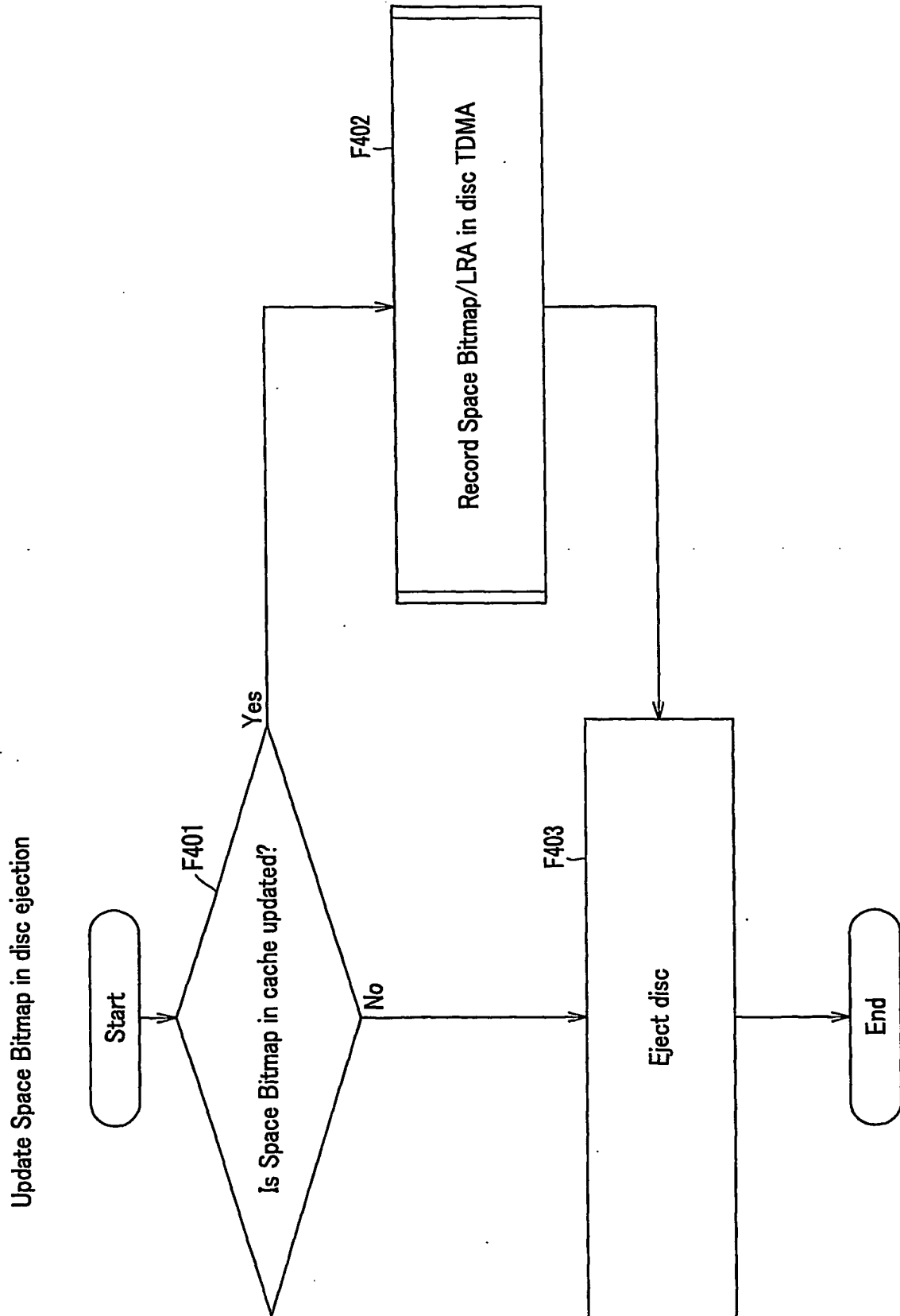


FIG.19

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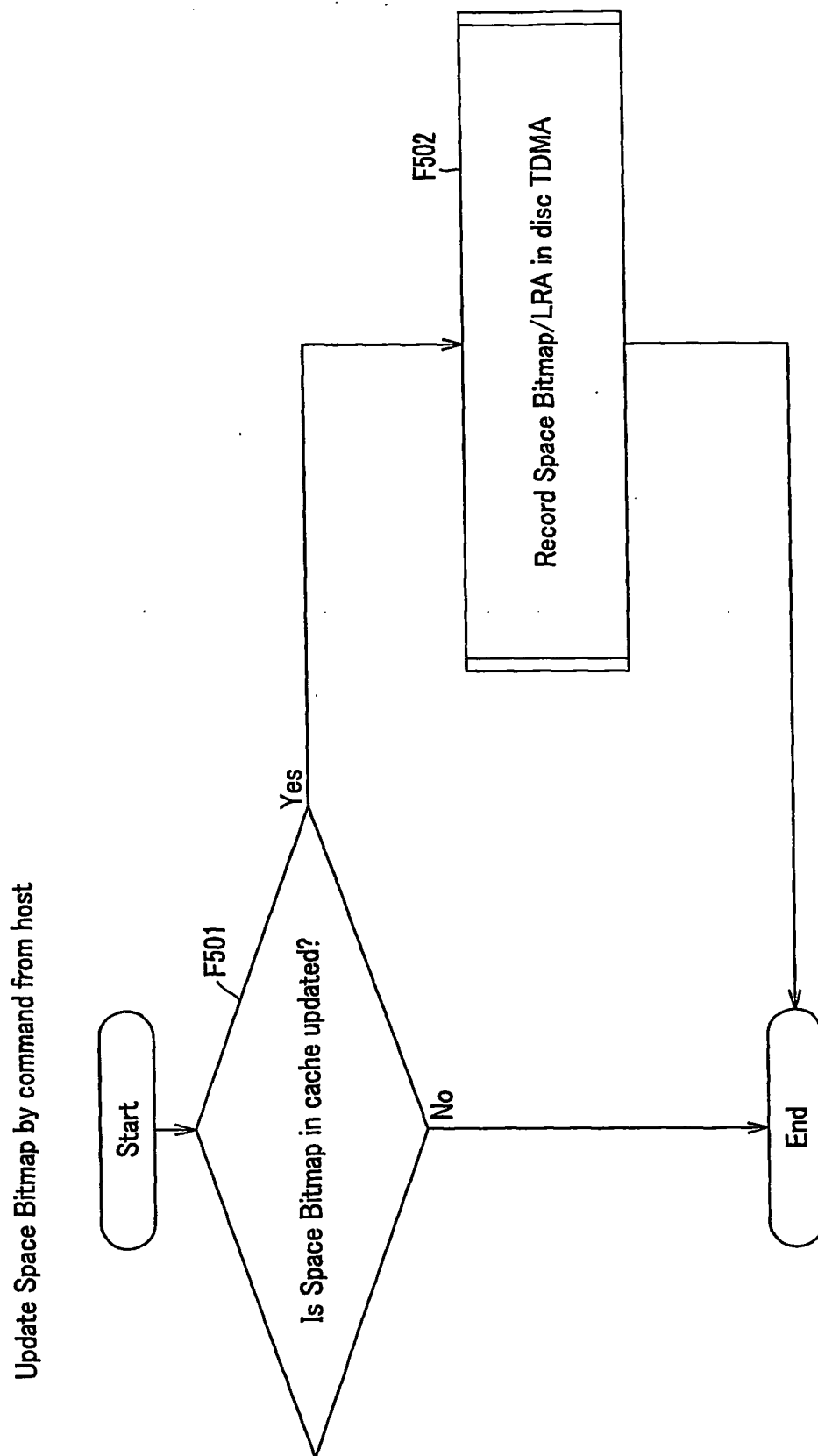


FIG.20

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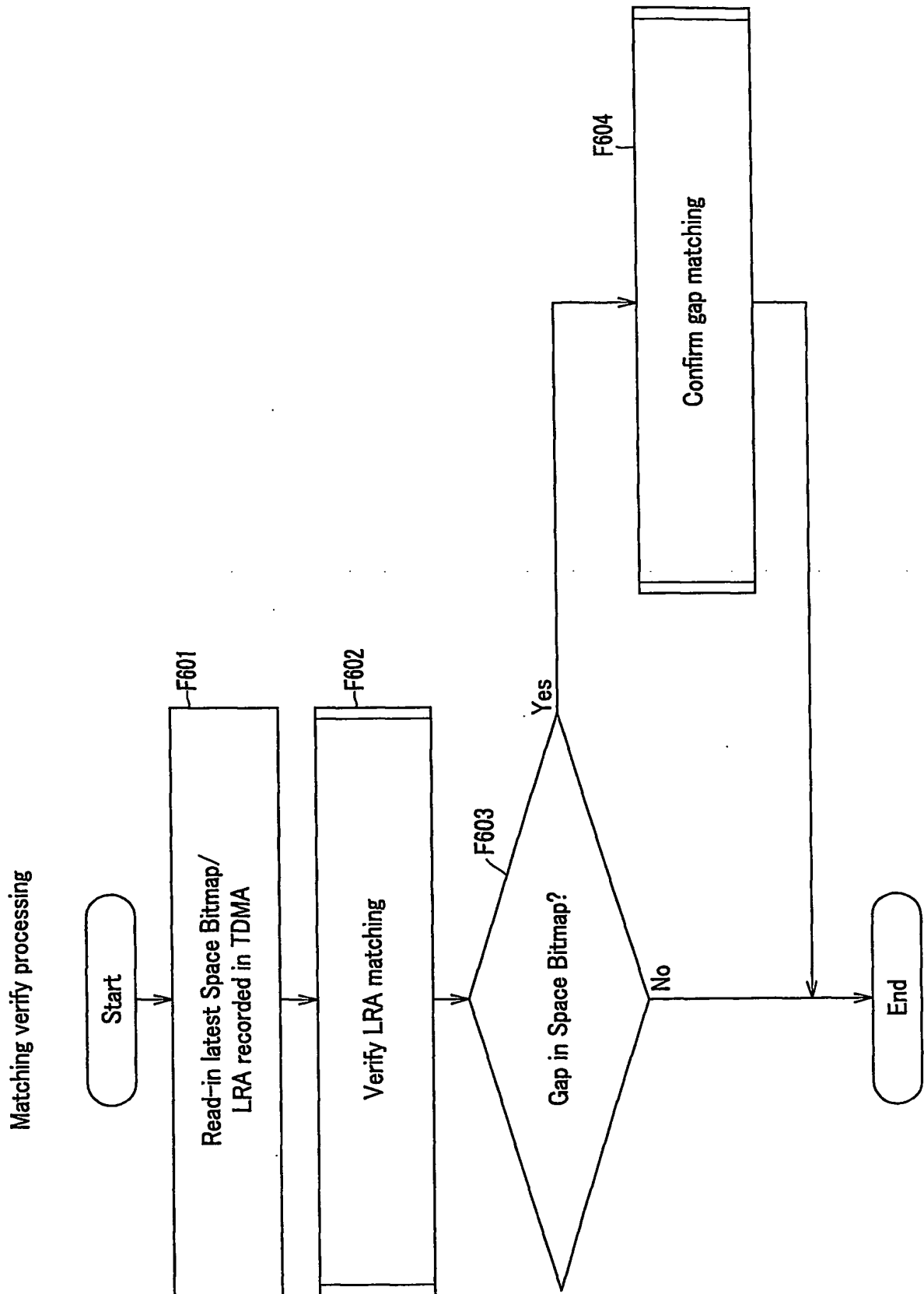


FIG.21

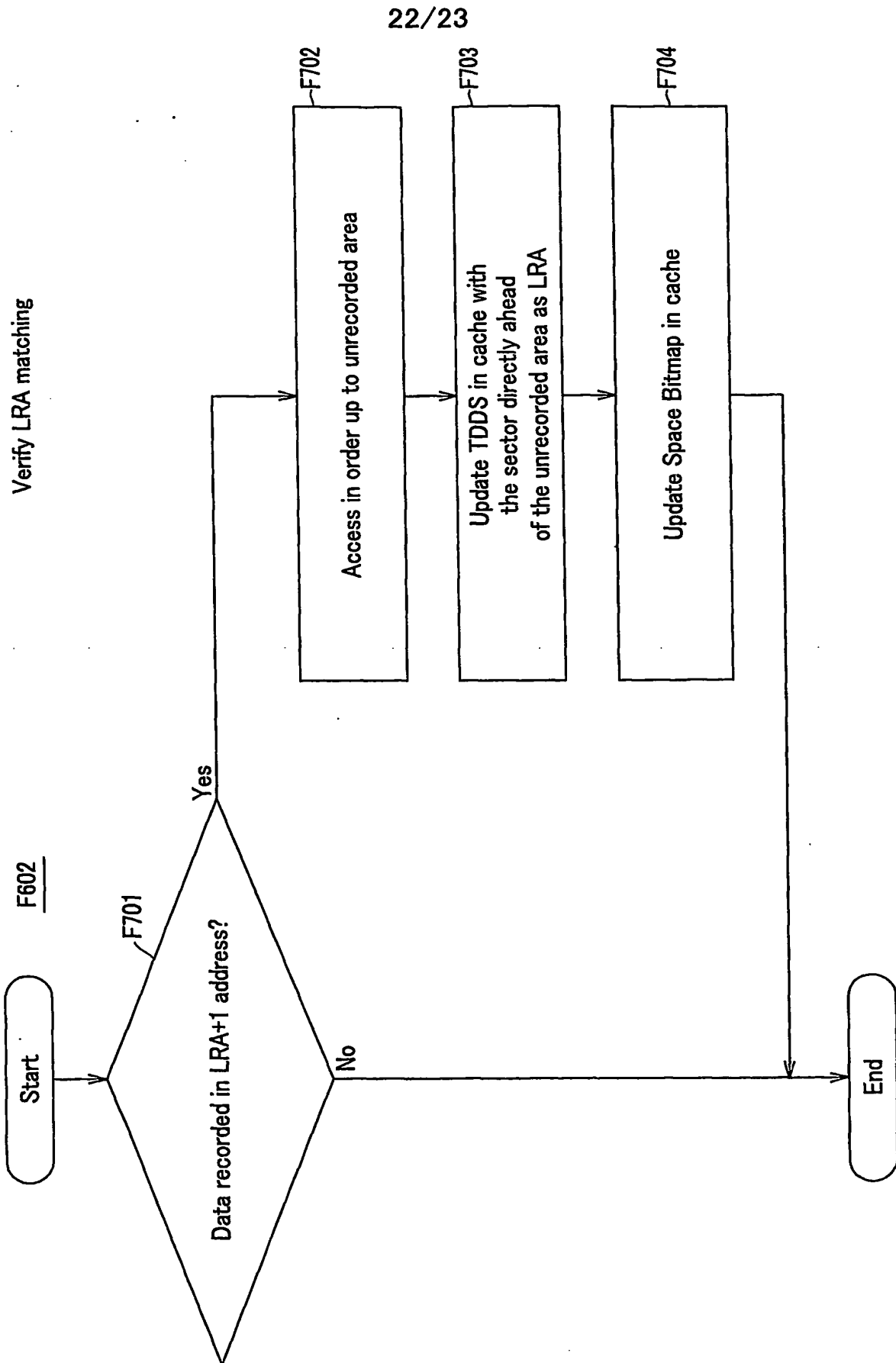


FIG.22

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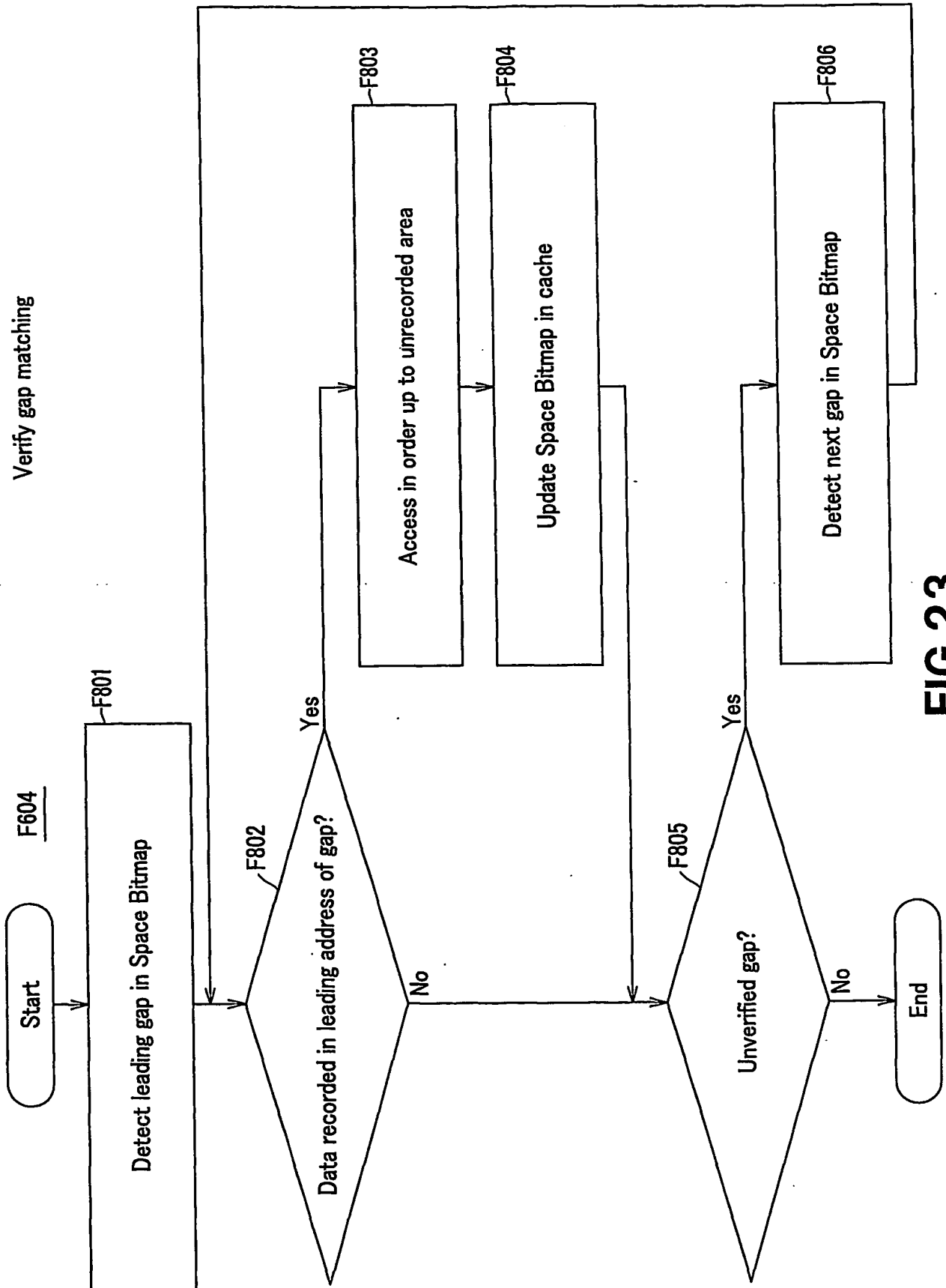


FIG. 23